# ANNEX 5:

# ARES
# USER MANUAL

**Activity B6 - Training**

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# ARES USER MANUAL

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# 1 How to set up and run ARES

## *1.1 Requirements*

### 1.1.1 To install ARES tool

If you do not have a previous installation of the ARES tool:

***Install a JDK***

- Get J2SE version 1.4.2 SDK or higher from http://java.sun.com/j2se/
- Set the JAVA_HOME environment variable (**Start → Control Panel → System Properties → Advanced → Environment Variables**) to point to the JDK installation directory, e.g. C:\java\j2sdk1.4.2_05

***Install a JBoss***

- Get JBoss J2EE application server version 4.0.x from http://www.jboss.org
- Copy the JBoss folder into your system.

***Install a MySQL instance***

- Get MySQL (version 4.x or 5.x recommended) from http://www.mysql.org
- If you have already installed on your machine a different version or you have a different kind of database you can use it changing the data source parameters (Section 1.1.2).

### 1.1.2 To deploy ARES

***Install the Java Runtime Environment (JRE)***

- If you do not have installed a J2SE SDK that already includes the JRE, get the J2SE 1.4.2 JRE from http://java.sun.com/j2se/

***Deploy the WAR file into the application server***

- Find the "deploy" folder of your JBoss installation and put there the ARES.war file containing all the necessary resources for running the software (if, for instance, your JBoss is installed into C:\JBoss4.0.3\ so normally you can find that folder in the path C:\JBoss4.0.3\ server\default\deploy\).
- The package includes also all the necessary Java libraries needed by the tool (including Jena 2).

***Deploy the ARES database for logs***

- Create a new database instance.
- If you are not using MySQL as database, you have to include the appropriate JDBC driver into the system classpath or adding it into the C:\JBoss4.0.3\ server\default\lib folder.
- Run the following SQL script in the DB instance created for ARES, in order to setup all the necessary tables.

```
DROP TABLE IF EXISTS LOGS;


CREATE TABLE LOGS
      ( id VARCHAR (100) NOT NULL,
      level INTEGER NOT NULL,
      type VARCHAR (50) NOT NULL,
      timestamp  DATE NOT NULL,
      message VARCHAR (200) NOT NULL,
      messagecont TEXT,
      PRIMARY KEY(id)
      );
```

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***Setup the JBoss data source***

- In order to allow the usage of different kinds of databases the connection to the DB is managed by the tool via a JBoss data source.
- Find the "deploy" folder of your JBoss installation where you have putted the ARES war file (if, for instance, your JBoss is installed into C:\JBoss4.0.3\ you can find that folder in the path C:\JBoss4.0.3\ server\default\deploy\).
- If a previous version of the data source file does not exist the first step is the creation of an XML file called jdbc-ds.xml into the "deploy" folder.
- Add to the jdbc-ds.xml file a new data source like the following XML.

```
<datasources>
  <local-tx-datasource>
    <jndi-name>dataDB</jndi-name>
    <connectionurl>
      jdbc:mysql://localhost/aresdb1
    </connection-url>
    <driver-class>com.mysql.jdbc.Driver</driver-class>
    <user-name>root</user-name>
    <password>root</password>
  </local-tx-datasource>
</datasources>
```

- The fields in red have to be filled with your own DB installation parameters:
  - <connectionurl>: Should include the exact sub-protocol (including type of connector, the type of DB and the address of the DB server).
  - <driver-class>: The name of the Java connector for the specific DB.
  - <user-name> and <password>: Authentication parameters to access to the ARES DB instance.

## 1.1.3 To run ARES

***Start the DBMS***

- Start the database management system if it is not still running. Normally on Window the DBMS are installed as automatic service and starts automatically.

***Start JBoss***

- If you do not have set the JAVA path in your system:
  a. *Windows 2000/XP* users may set their path by right-clicking on 'My Computer' and selecting 'Properties'. Under the 'Advanced' tab, there is a button that allows you to set the 'Environment variables'. Click on this and alter the 'Path' variable so that it also contains the path to the Java executable. For example, if you have installed Java in c:\jdk and your path is currently set to C:\WINDOWS\SYSTEM32, then you would change your path to read C:\WINDOWS\SYSTEM32;c:\jdk\bin.
  b. *Windows 95/98/ME* users may find that their path variable is stored in a different place. Edit the c:\autoexec.bat file and add the following line at the end: SET PATH=%PATH%;c:\jdk\bin (This also assumes that you have installed Java in c:\jdk)
  c. Linux, UNIX, Solaris, FreeBSD users must set their PATH variable to point to where the java binaries have been installed. Please refer to your shell documentation if you have trouble doing this. For example, if you use bash as your shell, then you would add the following line to the end of your .bashrc: export PATH=/path/to/java:$PATH
- If you JBoss instance is not running, find the \bin folder under your JBoss installation path and double click ton he run.bat file.
- Wait the starting process end then check if the server encountered some errors.
- Point with your browser to the main page of the server to check its correct execution (normally the address is http://localhost:8080/ for local installation).

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## 1.2 Run ARES

1. Open an Internet browser and point to the JBoss page on which the tool is running (normally http://localhost:8080/ARES for local installation).

## 1.3 Test the installation

You can test the installation of ARES following a simple tutorial test:

1. Start the JBoss server.
2. Load the ARES home page.

ARES - By Gruppo Formula Research Group - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://127.0.0.1:8080/aresv02/
Go Links
ATHENA
European Integrated Project
ARES
FORMULA
[we know how]
Version 1.0
by Gruppo Formula Research Group, division of Gruppo Formula, developed within the Athena Project
ARES is the Athena Semantic Reconciliation Engine.
If you don't have an account, you need to contact the ARES administrator (lorenzo.pondrelli@formula.it).
If you already have an account, please click on the Enter the system image.
If you want to know more about ARES, you may start reading the ARES User Manual.
Enter the system
Download the manual
For any further information contact lorenzo.pondrelli@formula.it
Done
Internet
start
NetBeans IDE 5....
C:\server\jboss-...
C:\WINDOWS\sy...
ARES - By Grupp...
doc1.doc - Micro...
IT
15.54

**Figure 1: ARES home page**

3. Insert your authentication parameters (company, username and password).

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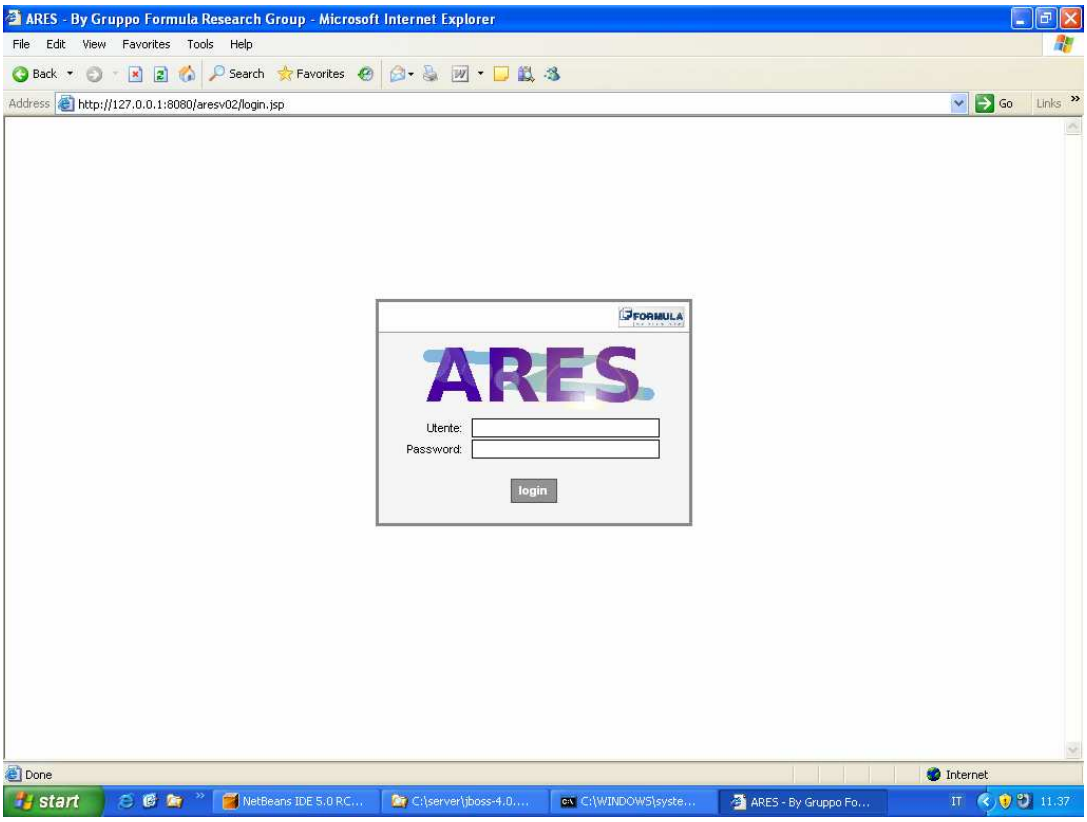


**Figure 2: ARES login page**

4. Setup the parameters for the integration into the ATHENA framework.
    a. Chose in the "Settings" menu the link to the "integration settings".
    b. Setup the URL of the ARGOS instance that it has to be integrated.
    c. Setup the URL of the THEMIS instance that it has to be integrated.
    d. Chose the Reference Ontology used by the tool.

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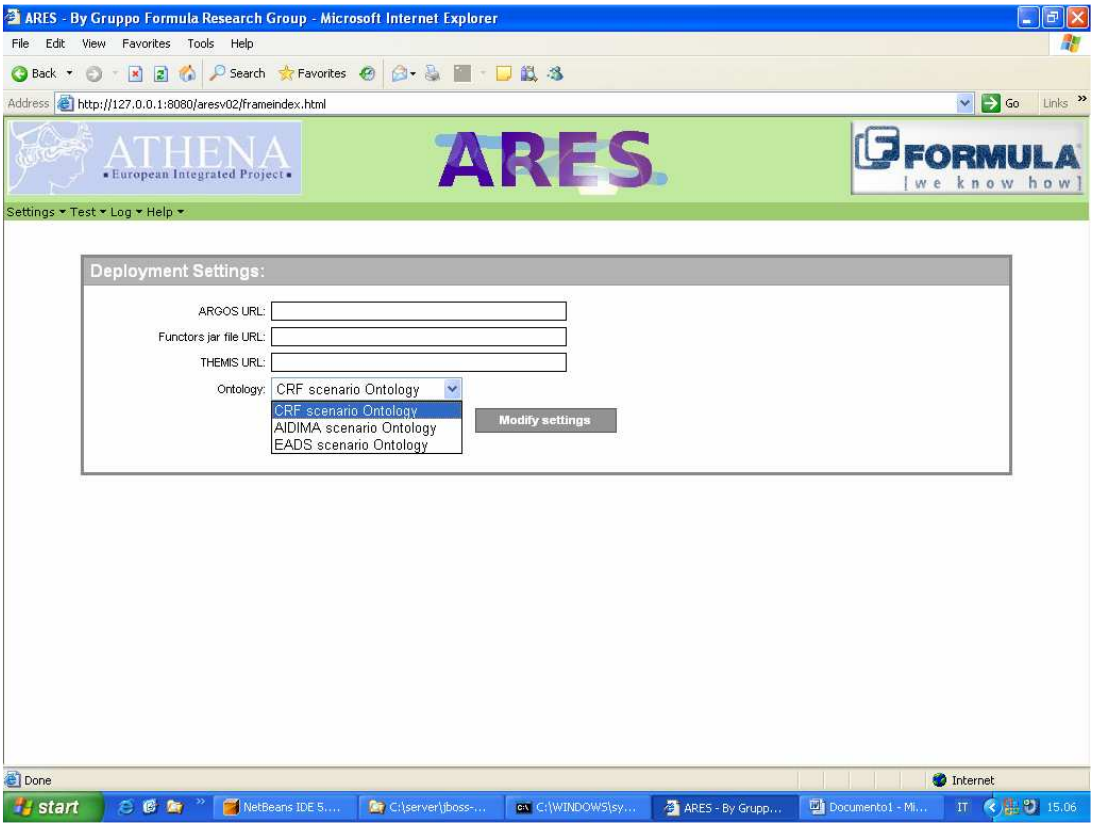


**Figure 3: ARES deployment settings page**

5. Test a simple reconciliation selecting in the menu called "test" the " full reconciliation test"
    a. Choose the initial RDF schema from the list imported from THEMIS
    b. Choose the final schema from the list imported from THEMIS
    c. Upload the RDF instance which will be reconciliated.
    d. Execute the reconciliation

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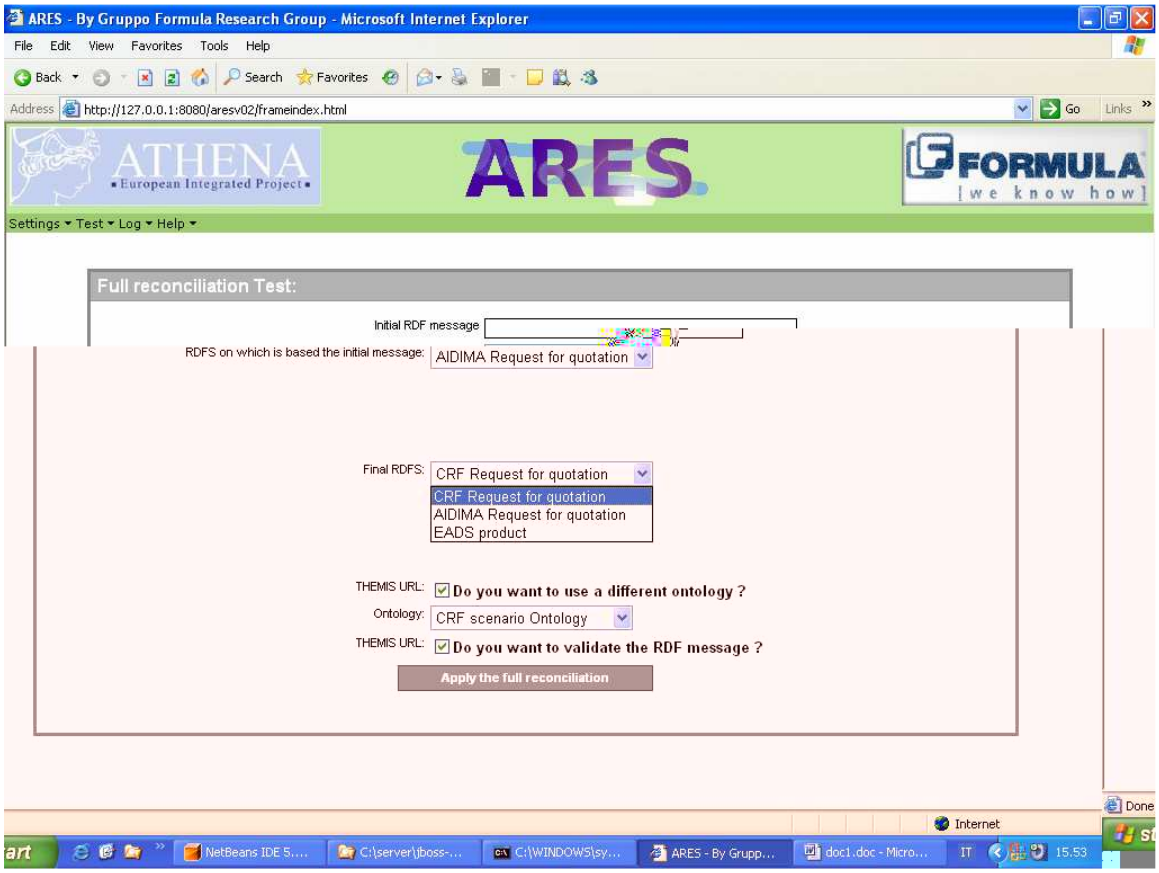


**Figure 4: ARES reconciliation test**

6. Visualize the logs panel.
    a. Chose in the "Logs" menu the link to the "Logs dashboard".
    b. In the main window appears the list of the logs stored into the system

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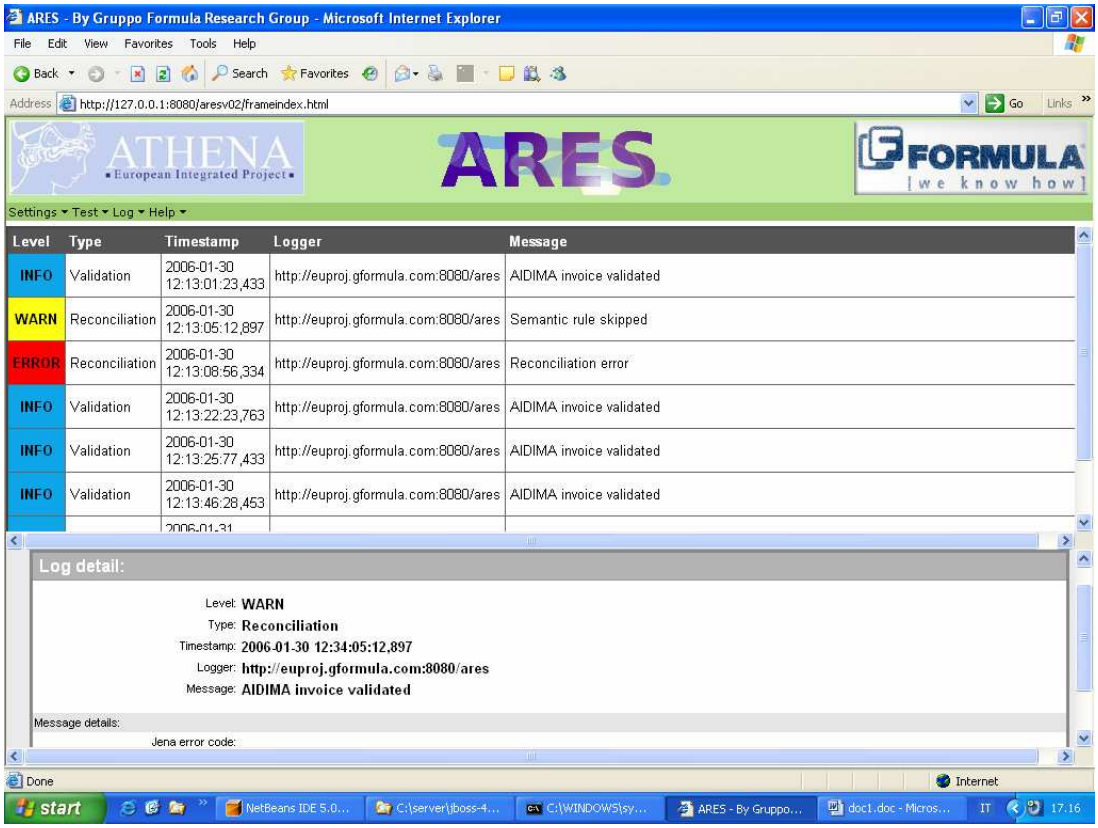


**Figure 5: ARES logs dashboard**

## 1.4 FAQs

***Why do you use JBoss and not a lighter application server such as Tomcat or Jetty?***

JBoss is an open source project hosted by Sourceforge and its web container is the famous Tomcat. It is more extensible, easily deployable without any particular installation and allows to use data sources in order to implement a perfect three layer architecture, ensuring the abstraction from particular DBMS.

***Is it possible to use different databases?***

ARES is built using standard Java JDBC-based libraries that allow to use different databases. Also Jena permits to deploy its persistency layer over different types of DBMS. During the development MySQL has been chosen because it is free, it is easily deployable and contains advanced features.

## 1.5 Known Issues

- ***ARES versions support***

  The ARES tool is not tested with versions 3.x or lower of JBoss, it is tested only with version 4.x and 5.0 of MySQL and JDK 1.4.2 or 1.5, so it is possible to get problems installing the tool in older and newer versions of those components.

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## 1.6 Used Configuration

The examples in this document were tested with the following configuration:

- Java version 1.5.0 upgrade 6
- JBoss 4.0.3
- MySQL 5.0
- Win XP pro SP 1

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# 2 References

[1] Java home page. http://java.sun.com/j2se/
[2] JBoss home page. http://www.jboss.org
[3] MySQL home page. Http://www.mysql.org
[4] Jena 2 home page. Http://jena.sourceforge.net

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